IN THE CLAIMS

Claims 7-24 are new. No new matter has been added. Please amend the following claims which are pending in the present application:

1. (Currently amended) A superconductor, comprising:

particles made of a superconductive material; and

a conductive material selected to be driven to a superconductive state when in proximity to the superconductive material and at least including gallium, an unbroken section of the conductive material being located sufficiently close to a plurality of the particles to be driven to a superconductive state by the superconductive material, the gallium being prepared to have a structure that has the highest lambda value.

2. (Original) The superconductor of claim 1, wherein the superconductive material is magnesium diboride.

3. (Original) The superconductor of claim 1, wherein the conductive material is in contact with the superconductive material.

4. (Currently amended) A method of making a superconductor, comprising:

forming a plurality of particles of a superconductive material;

preparing gallium to have a structure that has the highest lambda value; and

locating a conductive material adjacent the superconductive material, the conductive material being selected to be driven to a superconductive state when in close proximity to the superconductive material, the conductive material at least including the prepared gallium, and an unbroken length of the conductive material being in sufficiently close proximity to a plurality of the particles to be driven to a superconductive state by the particles.

5. (Currently amended) The method of claim [[6]] 4, wherein the superconductive material is magnesium diboride.

6. (Original) The method of claim 5, further comprising:

assembling an elongate member from the particles and the superconductive material; and

drawing the elongate member into a wire.

7. (New) A superconductor, comprising:

particles made of a superconductive material; and

a conductive material selected to be driven to a superconductive state when

in proximity to the superconductive material and at least including gallium, an unbroken section of the conductive material being located sufficiently close to a plurality of the particles to be driven to a superconductive state by the superconductive material, the gallium being amorphous.

8. (New) The superconductor of claim 7, wherein the superconductive material is magnesium diboride.

9. (New) The superconductor of claim 7, wherein the conductive material is in contact with the superconductive material.

10. (New) A method of making a superconductor, comprising:

forming a plurality of particles of a superconductive material;

preparing gallium to have an amorphous structure; and

locating a conductive material adjacent the superconductive material, the conductive material being selected to be driven to a superconductive state when in close proximity to the superconductive material, the conductive material at least including the prepared gallium, and an unbroken length of the conductive material being in sufficiently close proximity to a plurality of the particles to be driven to a superconductive state by the particles.

11. (New) The method of claim 10, wherein the superconductive material is magnesium diboride.

12. (New) The method of claim 10, further comprising:

assembling an elongate member from the particles and the superconductive material; and

drawing the elongate member into a wire.

13. (New) A superconductor, comprising:

particles made of a superconductive material; and

a conductive material selected to be driven to a superconductive state when in proximity to the superconductive material and at least including 20% by volume gallium, an unbroken section of the conductive material being located sufficiently close to a plurality of the particles to be driven to a superconductive state by the superconductive material.

14. (New) The superconductor of claim 13, wherein the superconductive material is magnesium diboride.

15. (New) The superconductor of claim 13, wherein the conductive material is in contact with the superconductive material.

16. (New) A method of making a superconductor, comprising:

forming a plurality of particles of a superconductive material; and

locating a conductive material adjacent the superconductive material, the conductive material being selected to be driven to a superconductive state when in close proximity to the superconductive material, the conductive material at least including 20% by volume gallium, and an unbroken length of the conductive material being in sufficiently close proximity to a plurality of the particles to be driven to a superconductive state by the particles.

17. (New) The method of claim 16, wherein the superconductive material is magnesium diboride.

18. (New) The method of claim 16, further comprising:

assembling an elongate member from the particles and the superconductive material; and

drawing the elongate member into a wire.

19. (New) A superconductor, comprising:

particles made of a superconductive material; and

a conductive material selected to be driven to a superconductive state at an operating temperature of at least 20°K when in proximity to the superconductive material and at least including gallium, an unbroken section of the conductive material being located sufficiently close to a plurality of the particles to be driven to a superconductive state by the superconductive material.

20. (New) The superconductor of claim 19, wherein the superconductive material is magnesium diboride.

21. (New) The superconductor of claim 19, wherein the conductive material is in contact with the superconductive material.

22. (New) A method of making a superconductor, comprising:

forming a plurality of particles of a superconductive material; and

locating a conductive material adjacent the superconductive material, the conductive material being selected to be driven to a superconductive state when in close proximity to the superconductive material at an operating temperature of at least 20°K, and an unbroken length of the conductive material being in

sufficiently close proximity to a plurality of the particles to be driven to a superconductive state by the particles.

23. (New) The method of claim 22, wherein the superconductive material is magnesium diboride.

24. (New) The method of claim 22, further comprising:

assembling an elongate member from the particles and the superconductive material; and

drawing the elongate member into a wire.